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MELDRUMS LTD.

Institutional and
Trade Refuse
Destructor

TIMPERLEY :: MANCHESTER

THE
LONDON
TRADING
COMPANY

ST. JAMES'S

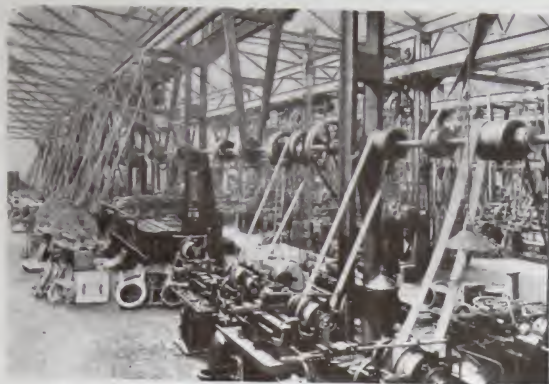
MANCHESTER

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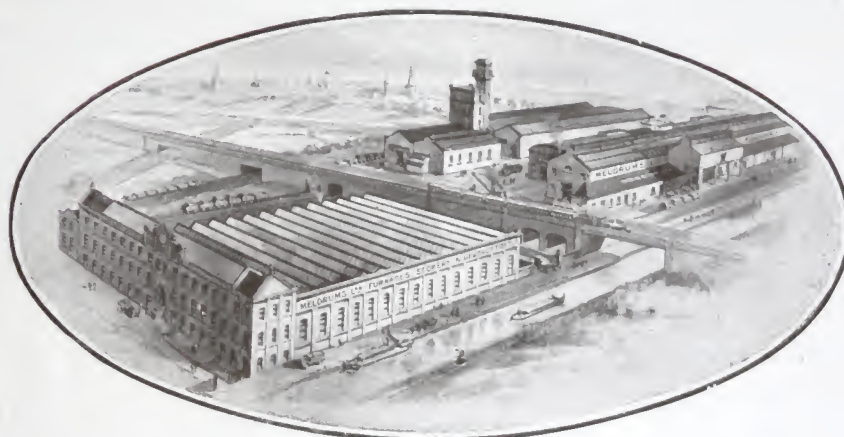
MELDRUMS LTD., TIMPERLEY, MANCHESTER.



MACHINE SHOP



FOUNDRY



VIEW OF WORKS, TIMPERLEY

Manufacturers of

Forced Draught Furnaces

For Boilers of all types, Stills, Coppers, &c.

Mechanical Stokers.

Coking and Sprinkler types.
Fixed or Moving Grates.

Refuse Destructors

For Town, Institutional or Trade Waste.
With Boilers, Heaters, Driers, &c., for the
Utilization of the Heat.

Chemical Plant.

Acid Eggs, Stills, Jacketed Pans, Mixing Pans,
Receivers, Columns, Towers, Pumps, Automatic
Acid Elevators, Cocks, Valves, Pipes, &c., in Cast
Iron, "Meldrum" Acid Resisting Metal, Gun
Metal, Regulus Metal or Ebonite.

Steam Jet Apparatus.

Acid Elevators, Water Lifters, Boiling Jets,
Air Compressors, Exhausters, Agitators, Blowers,
Ejectors.

MELDRUMS LTD. TIMPERLEY, nr. Manchester

Telephone: 181 ALTRINCHAM.
Codes: A B C 5th Ed.; Liebers.

Telegrams: "MELDRUM, ALTRINCHAM."

LONDON OFFICE: 108 VICTORIA STREET,
WESTMINSTER, S.W. 1.

Telegrams: "Meldrumio Sowest, London."
Telephone: Victoria 7521.

BRANCHES at Glasgow, Sheffield, Birmingham,
Newcastle, Cardiff, Sydney, Paris,
Brussels, Melbourne, New Zealand,
Buenos Aires.

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

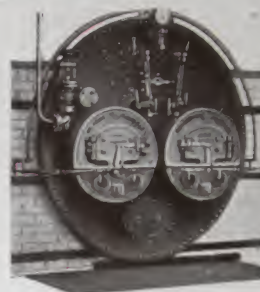
WHAT WE MAKE.

THE "MELDRUM" COMBUSTION APPLIANCES

Cover the entire range of efficient combustion, heat utilization and refuse destruction.

The "Meldrum" Furnace.

Adaptable to any type of Boiler, new or old, Coppers, Stills, Kilns, and all Furnaces using solid fuel, with fittings for utilizing tar, crude oil or gas.
Controls smoke.
Can be made to operate silently.
Burns any fuel or combustible refuse.
Increases the steam output and will save the cost of new boilers.



The "Meldrum" Self Clinkering Hand-Fired Furnace

is a connecting link between our ordinary Furnace and our Mechanical Stoker, and is of value where a very dirty fuel is to be utilized.

The "Meldrum" Mechanical Stoker.

SPRINKLING TYPE

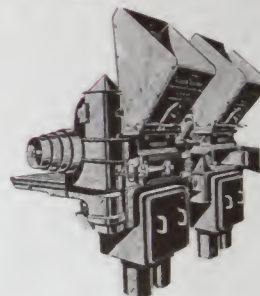
with either fixed or moving bars, gives the highest possible results from the very poorest fuels. Specially adapted for burning non-caking slack, small coke, coke breeze, &c.

COKING TYPE

The Meldrum "Koker" Stoker for caking coals is the most perfect of the "Meldrum" series for high efficiency and control of smoke.

CONVEYORS AND ELEVATORS

For handling and storing coal and ashes. Vacuum flue cleaning plants.



The "Meldrum" Patent Refuse Destructor.

In many cases where large quantities of Trade Refuse such as Sawdust, Oily waste, Spent tan, Spent hops, Colliery waste, Municipal refuse, Canteen refuse, &c., are to be destroyed the Destructor should be installed.

It is also extensively installed in Hospitals, Asylums, Hotels, Camps, Factories, Engineering Works, &c. Meldrum Destructors range from the smallest size consuming 30 lbs. of general waste per hour, up to any capacity for the largest Municipality.

In many cases the heat generated can be put to profitable and useful purposes.



Salvage Plants.

For Screening, Grading and Sorting Towns' Refuse. Disintegrators and Manure Plants.

"Meldrum" Steam Jet Appliances.

Large stocks are kept of Steam Jet Appliances, such as Exhausters, Compressors, Agitators, Ejectors and Injectors, Boiling Jets, Producer Blowers, Acid Elevators, Retort Scurfers, Water Lifters, Tar and Oil Burners.



"Meldrum" Chemical Plant, Castings, &c.

The plant required by Chemical and Dye Works, &c., can be made to our own or customer's designs, and includes Acid Eggs, Boiling Pans, Jacketed Pans, Mixing Pans with Agitator Gear, Stills, Receivers, Rectification Towers, Sulphonating Pots, Caustic Pots, Fractionating Columns, Salt Cake Pans, Nitre Pots, Centrifugal Pumps, Cocks and Valves, Pipe Lines, &c. Of Metals and Materials to resist any Acids. Complete plants for the manufacture of Acids and Chemical Products.

All the above can be supplied in our "Meldrum" Acid Resisting Metal which is the most reliable and widely used Acid Resistant.

Our Foundry Department deals with all classes of castings, up to four tons in weight, particularly those required by the Chemical and allied trades, Machine Tool Makers, and General Engineers.

We can undertake machine work of castings and repetition work in large quantities.



MELDRUMS LTD., TIMPERLEY, MANCHESTER.

REFUSE DESTRUCTORS

For TRADE and INSTITUTIONAL PURPOSES.

The difficulty and expense of getting Waste Products and Refuse removed is increasing, and it has become more necessary than ever to provide means to deal with it on the spot.

The Installation of a **Meldrum Trade Refuse Destructor** will enable you to destroy your refuse effectively, leaving only a hard innocuous clinker, which is very useful for filling low ground or making roads and paths.

The refuse can be destroyed as it accumulates every day, and not left to get foul and become a nuisance.

The danger in disease spreading by means of flies is now well known, and no refuse can be left lying to rot in the open without it becoming the breeding ground of swarms of flies, all potential carriers of disease.

The necessity of installing efficient Destructor plant, particularly at hospitals, is quite obvious.

STEAM RAISING, HEATING, &c. Where there is a sufficient quantity of refuse to be dealt with, and it has a fair calorific value, it will probably pay to utilize the heat of combustion for Steam Raising, Drying purposes, or Heating Water.

We have a variety of arrangements for doing this, and when we have details as to the amount of the refuse to be dealt with, its nature, and the requirements for steam, hot water, &c., we can advise as to the best methods of utilizing the heat.

DATA REQUIRED. To enable us to decide on the most suitable plant for every installation, we desire the following information.

Nature of Refuse.

Weight to be dealt with per day or per week.

Number of hours per day and days per week it is desired to work.

Is it desired to utilize the heat for Steam Raising, Heating Water, Drying, or other purpose?

Are there existing boilers for use with the Destructor?

Is there an existing chimney available?

Is there any steam, electrical supply or shafting (for driving a fan) available on site for forced draught working?

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

TYPES OF PLANT. We can offer several types of Destructor Plants:—*i.e.*, with C.I. frame lined with firebrick for natural draught working; with steel casing for natural or forced draught working; built of firebrick and red brick with buckstay supports. We recommend Forced Draught Working where practicable, as the combustion is more rapid and complete, and a smaller plant will suffice.

MATERIALS AND WORKMANSHIP. We use only the very best firebricks and fireclay in all our plants, ensuring long life at high temperatures. All machining is of the most accurate nature and all parts are made interchangeable wherever possible.

FUEL TESTING. We have an extensive, up-to-date laboratory, employed largely on testing fuels. In cases where a steam raising plant is projected it is necessary to test the fuels to calculate the amount of steam which can be generated.

Enquirers should send a sample in the normal state in which it is to be burnt. If it contains a large amount of moisture it should be sent in a tin or cask, so that evaporation does not take place in transit.

APPLICATIONS. We can meet all reasonable requirements, our Hospital Destructors will rapidly and efficiently destroy any class of refuse from the kitchen waste of a Fever Hospital, to the dangerous sputum of a Sanatorium for Consumption.

Similarly for Factories we design Destructors to deal with any class of refuse from ordinary dry factory waste and sweepings to such refuse as waste fruit pulp, containing as much as 90% of moisture.

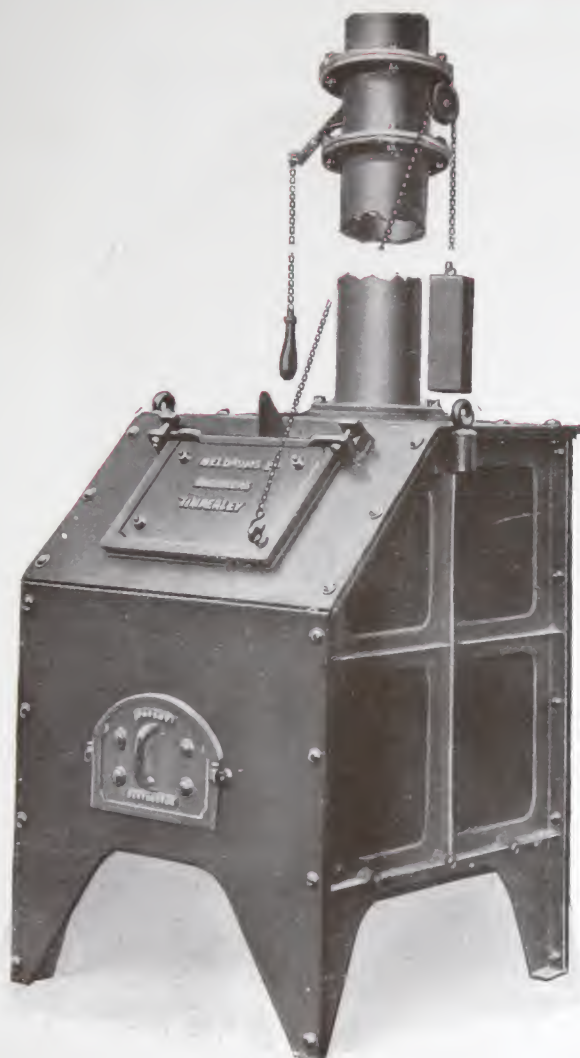
It is worthy of note that we were the first Destructor makers to dispose successfully of this latter class of waste.

EFFICIENCY. Our Destructors are right up-to-date and represent the latest and most efficient practice, their leading features may be summarised as follows:—

- Extreme simplicity and great durability.
- Rapidity and efficiency of cremation.
- Absolute freedom from nuisance of every kind.
- Minimum trouble and risk in the handling of refuse.
- Minimum amount of space occupied.
- Minimum height of chimney required.

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

INDUSTRIAL DESTRUCTORS



No. 2B DESTRUCTOR, with C.I. FRAME.

To meet the demand for a lower priced plant than our standard Steel Cased Destructor, we designed one with a Cast Iron Frame as illustration.

It is built on the interchangeable plan for rapid production.

The lining is 3" thick, and is of the best firebrick procurable.

The chimney is manufactured in standard lengths, and a Damper section is provided to regulate the rate of combustion.

A Back Outlet can be provided to connect into an existing flue if this is more convenient.

The Grate Bars are of our interlocking pattern, the air spaces provided being arranged to suit the class of Refuse it is intended to destroy.

Standard sizes, as tabulated below, are always in stock or progress, so that quick delivery can be made.

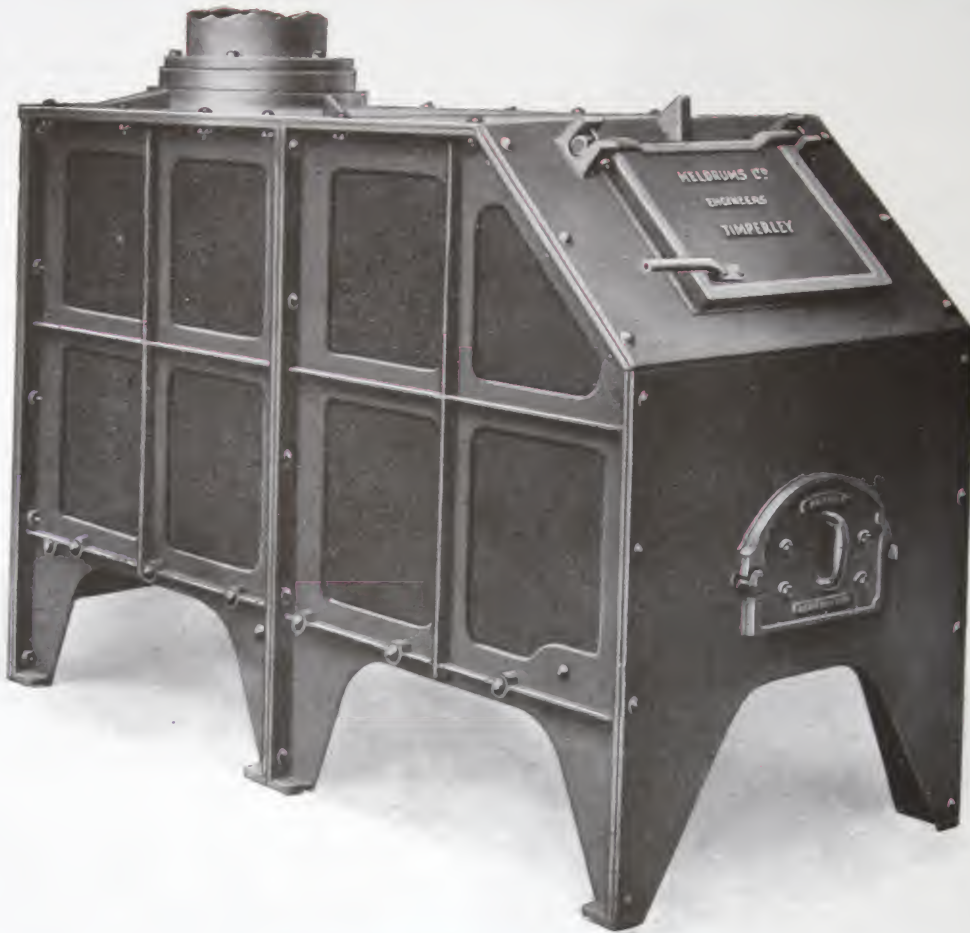
This design gives a highly efficient plant at a very moderate cost.

SIZES AND BURNING CAPACITIES.

Size	Burning Capacities Natural Draught	Floor Space and Height			Dia. and Height of Chimney		Price including Chimney	Set of Firing Tools	
		ins.	ins.	ins.	ins.	ft.		£	s.
1½ B	80 lbs. per hour ...	33	22	40	6	12			
2 B	120 lbs. „ ...	36	37	51	8	12			
3 B	180 lbs. „ ...	43	37	51	10	12			
4 B	240 lbs. „ ...	51	37	51	12	12			
5 B	300 lbs. „ ...	63	37	51	13	12			

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

INDUSTRIAL DESTRUCTORS



No. 5B DESTRUCTOR, with C.I. FRAME.

The above illustrates the largest size of Destructor with Cast Iron Frame. It has a capacity of $3\frac{1}{2}$ cwt. per hour.

The lining for the front, sides, and back, consists of ordinary firebricks.

This greatly simplifies the matter of repairs and renewals, as any small burnt or damaged portion can be readily replaced without displacing any of the surrounding brickwork.

These larger sizes are taken to pieces after erection in the shop and re-erected on the site, and the lining put in place by our own bricklayers.

There are a number of uses to which the heat generated by combustion can be put: Steam Raising, Water Heating, Heating a Hot Plate or Annealing Chamber, etc.

We are always willing to investigate a proposition for the disposal of Refuse, and advise as to the installation of a Destructor Plant to deal with it, and the results to be expected, probable saving, etc.

We have a well-equipped laboratory, and working Destructors for testing customers' samples on a large scale.

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

INSTITUTIONAL DESTRUCTORS.



Standard Hospital Destructor.

We have specialized for many years in Destructor Plants for Hospitals, Sanatoria, Asylums and similar Institutions.

At Hospitals for infectious diseases an efficient Destructor is of the utmost importance.

To enable us to compute the size of plant required by a Hospital we require to know only the number of beds in use, and the number of hours per day it is desired to have the Destructor in use.

If there is steam available where it is convenient to place the Destructor, it is an advantage to have our Forced Draught system fitted, as this largely increases the rate of combustion.

We can supply and erect suitable sheds, as illustrated below, to give protection from the weather, or we can supply a more pretentious building if desired.

We append a list of a few of the Institutions which use the "Meldrum" Destructor:—

The Royal Infirmary	...	...	...	Manchester
Heath Charnock Sanatorium	...	...	...	Chorley
The Metropolitan Asylums Board (8 Institutions)	...	...	...	London
West Heath Hospital	...	...	...	Birmingham
Derbyshire County Asylum	...	...	...	Mickleover
Littleborough and District Hospital	...	...	...	Smithy Bridge
Derbyshire Royal Infirmary	...	...	...	Derby
Addington Park Military Hospital	...	...	...	Croydon
Mount Vernon Hospital	...	...	...	Hampstead
Liverpool Infectious Diseases Hospital	...	...	...	Fazakerley
Trevol Naval Hospital	...	...	...	Devonport
The Poorhouse	...	...	...	Govan
Epsom and District Joint Hospital	...	...	...	Epsom
The Hospital for Sick Children, Gt. Ormond St.	...	...	...	London
The Cancer Hospital	...	...	...	Fulham
The Belvidere Fever Hospital	...	...	...	Glasgow
The Isolation Hospital	...	...	...	Chester-le-Street
King Edward VII. Sanatorium	...	...	...	Midhurst
The Royal Infirmary	...	...	...	Hull
The Royal Victoria Hospital	...	...	...	Belfast
The Isolation Hospital	...	...	...	Eastleigh
The Lancashire Asylums Board (3 Institutions)	...	...	...	Lancs.
Blackpool Corporation Fever Hospital	...	...	...	Blackpool
Manchester Union Workhouse	...	...	...	Crumpsall
The Walton Workhouse	...	...	...	Liverpool
Royal Hants County Hospital	...	...	...	Winchester
Stockport Infirmary	Stockport



Destructor Installation at a Hospital.

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INSTITUTIONAL DESTRUCTORS.



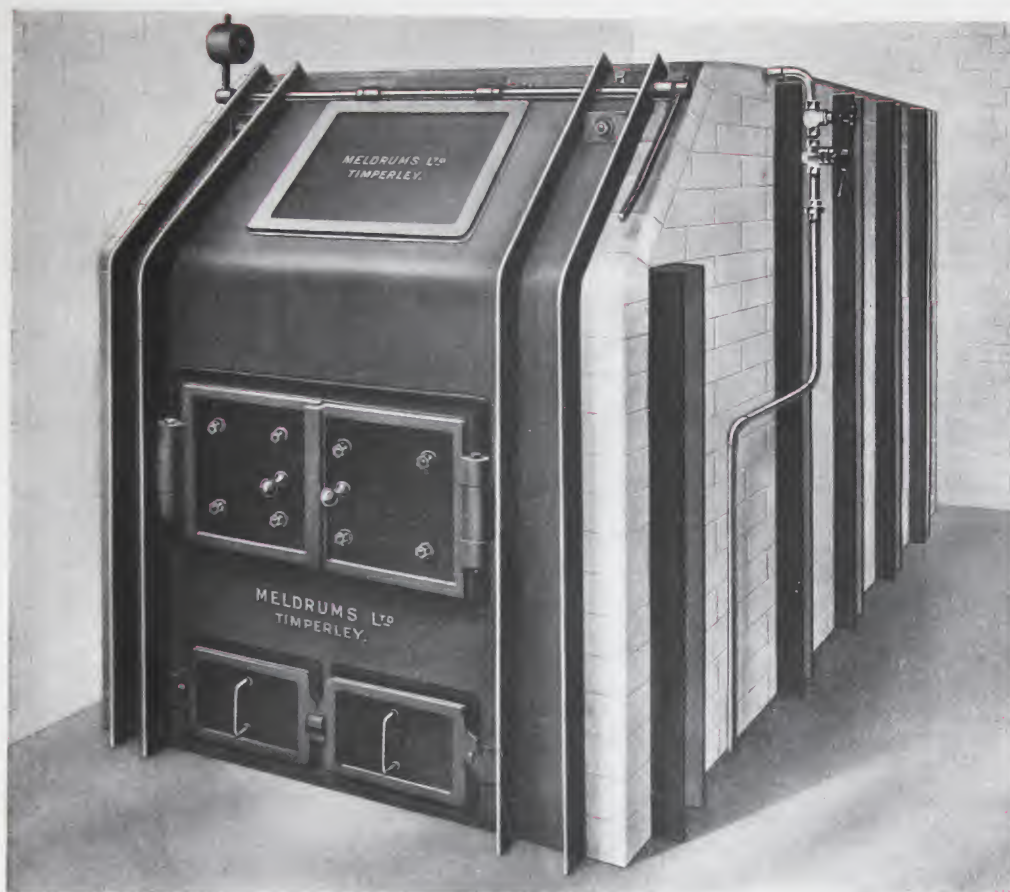
Destructor Installation at Park Hospital, Hither Green, London, S.E.

The illustration above shows a typical Hospital Installation. A large number of the leading hospitals are equipped with Meldrum plants.

For consumption sanatoria we supply, with the Destructor, suitable sputum receivers, made of light combustible material. Both receiver and contents are cremated in the Destructor. This system has very obvious advantages over any other; we shall be pleased to send full particulars to those interested in the planning and operation of sanatoria for the treatment of consumption.

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

INSTITUTIONAL DESTRUCTORS



DESTRUCTOR at Fazakerley Hospital, Liverpool.

Above is illustrated one of our Hospital Destructors, built entirely of brickwork supported by buckstays.

The Destructor is situated near the laundry buildings, being connected by an underground flue to the laundry boiler's chimney.

The furnace measures 13 feet by 5 feet, and will burn 3—4 cwt. per hour.

Steam jet forced draught is supplied from the Laundry boilers.

The refuse is tipped through the firing door on to the drying hearth, where the moisture is evaporated before the refuse is pushed on the fire, all the gases being consumed as they pass over the fire before entering the flue.

The Hospital Authorities report:—

"The Destructor is found to be quite efficient and capable of dealing with all the refuse from the Hospital."

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

INSTITUTIONAL DESTRUCTORS



MATTRESS DESTRUCTOR.

The above illustrates an improved form of Mattress Destructor erected by us at the City of London Mortuary, Golden Lane, London, E.C.

In this Destructor is presented an entirely novel method of cremating mattresses; instead of cutting them up they are introduced on edge, thus presenting the maximum surface for combustion.

This is an obvious advantage over cutting them up, or rolling and tying them.

This type of Destructor can of course be used for general refuse, and is suitable for cremating clothing, &c.

The plant illustrated is fitted with the "Meldrum" Patent Forced Draught system.

We are willing at all times to design special Destructors for purposes where our standard types are not suitable.

MELDRUMS LTD., TIMPERLEY, MANCHESTER

INDUSTRIAL DESTRUCTORS.



STANDARD STEEL CASED DESTRUCTORS.

Made in various sizes, to burn from 2 cwt. up to 2 tons per day.

The above illustration shows a group of our Standard Steel Cased Destructors, which are so largely used all over the World for burning every variety of refuse.

With our steel cased plants Forced Draught can be used, and this greatly increases the rate and efficiency of combustion. Where steam is available, a "Meldrum" Steam Jet Blower provides the best and cheapest form of Forced Draught.

If steam is not convenient a belt or motor driven blower is quite satisfactory.

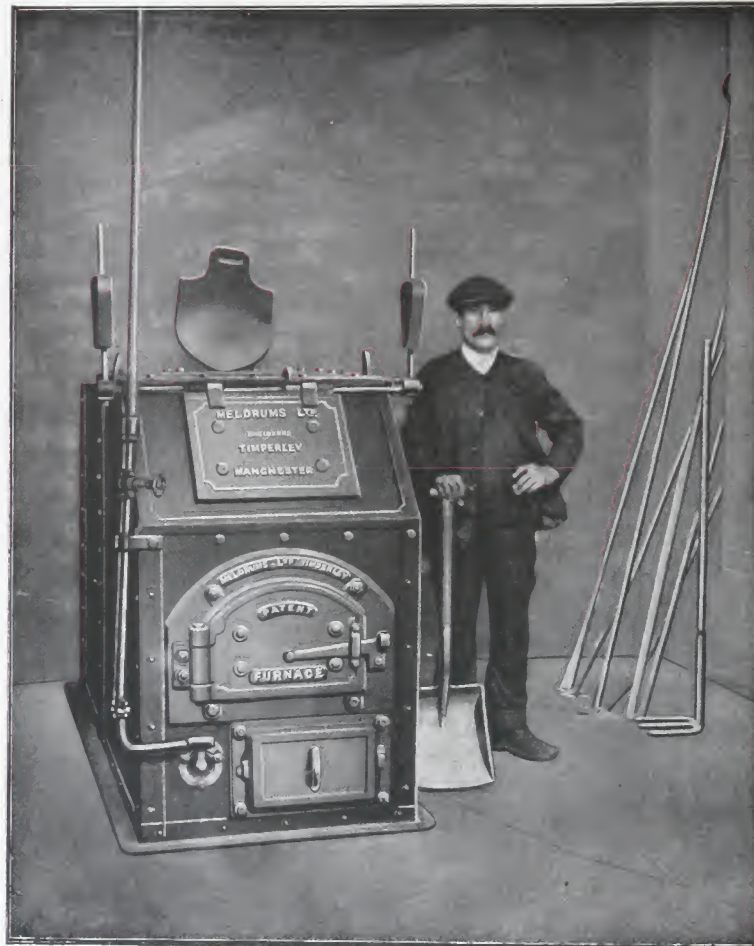
All the gases pass through the Combustion Chamber at the back, ensuring thorough cremation and entire absence of fumes and smells.

SIZES AND BURNING CAPACITIES.

Size.	Capacity Nat. Draught	Capacity Forced Draught.	Floor Space and Height.	Dia. and Height of Chimney.	Price.	Chimney.	Steam Jet F. Draught	Belt Driven Blower.
					£ : s.	£ : s.	£ : s.	£ : s.
1A	40 lbs. per hr.	60 lbs. per hr.	30" × 26" × 40"	6" × 25'				
2A	120 lbs. "	2 cwts. "	43" × 37" × 53"	8" × 25'				
3A	180 lbs. "	3 cwts. "	53" × 37" × 54"	10" × 25'				
4A	240 lbs. "	4 cwts. "	71" × 37" × 54"	12' × 25'				
5A	300 lbs. "	5 cwts. "	71" × 46" × 57"	13" × 25'				
6A	450 lbs. "	6½ cwts. "	78" × 54" × 60"	15" × 25'				
7A	600 lbs. "	8 cwts. "	84" × 60" × 60"	17" × 25'				

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

INDUSTRIAL DESTRUCTORS.



No. 3 Size DESTRUCTOR with FORCED DRAUGHT
at the Works of the Vulcan Motor Co., Southport.

The above illustrates a typical plant as suitable for Engineering Works, Factories, Canteens, etc. It has a capacity of 25 cwt. per day, and having the "Meldrum" Steam Jet Forced Draught, the combustion is very complete and rapid.

We have installed at the Works of the Vauxhall Motor Co., Ltd, Luton, one of our No. 3 plants, with a complete system for storage and collection.

This consists of a number of Steel Bins of 5 cwt. capacity, placed at convenient places in or about the shops, and the refuse is collected into these.

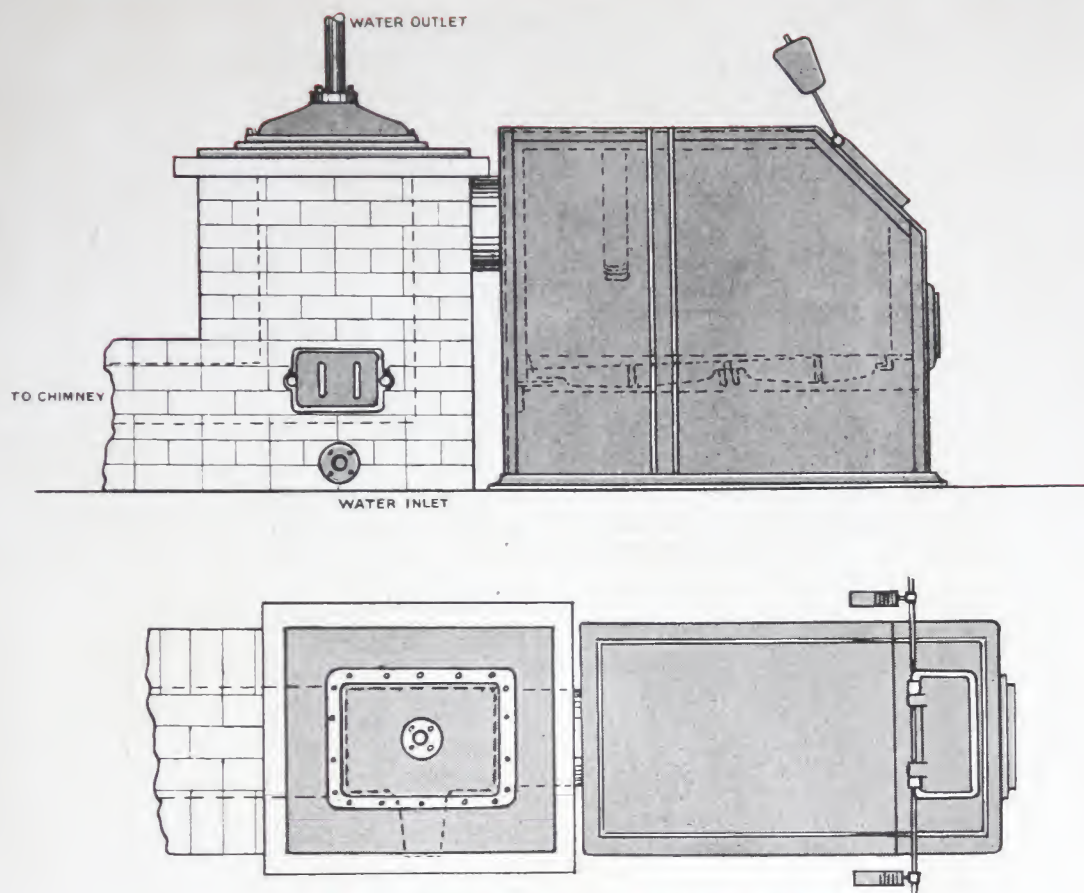
A two wheeled truck picks these containers up by the trunnions rivetted to them and takes them to the Destructor, where the contents are easily tipped.

One man can easily operate the collection and burning of the refuse from this large factory, and the premises are kept exceedingly clean.

This system is a very good one for a large establishment where there is no central site convenient for the Destructor, and also for large factories having a number of isolated shops spread over a considerable area.

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

INDUSTRIAL DESTRUCTORS



No. 4 Size DESTRUCTOR with WATER HEATER.

The above print illustrates one of the means of utilizing the heat from our small Destructors where there is no use for steam.

The Heater consists of C.I. top and bottom boxes, into which are expanded solid drawn steel tubes. Suitable cleaning doors are provided for the removal of dust.

In one installation a large pattern shop is heated by the combustion of the wood refuse made, and in a Joinery Works the heat is utilized to boil water and heat a number of glue pots.

We have also designed a plant for the heating of a hot plate for drying of metal goods after pickling.

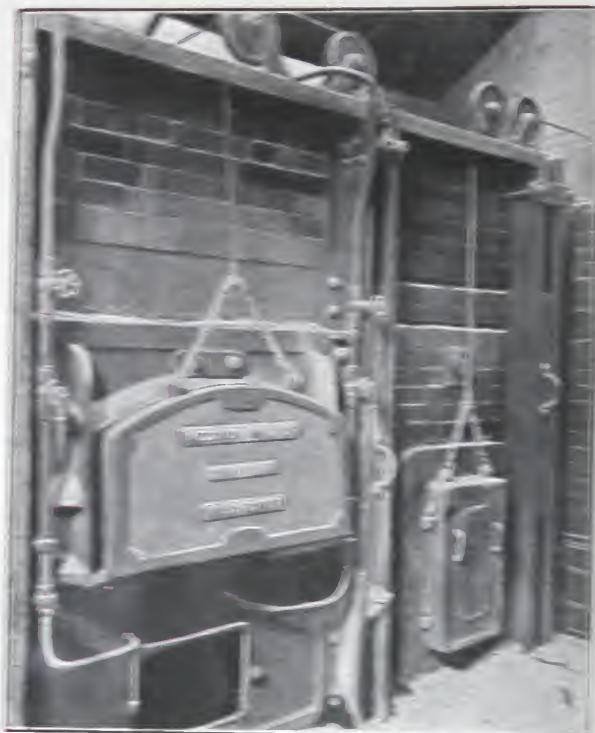
A very successful plant is installed at the factory of Messrs. Thos. Evans & Co. Ltd., Walsall. The heat is absorbed by a Water Heater as above illustrated, and the hot water circulates automatically in pipes in drying sheds. The destructor is fired by the waste material collected from the factory.

In the Midlands we have installed a No. 5 Destructor at a large Loco. Shop, and the gases fire a large Chain Annealing Furnace.

There are many profitable uses to which the heat from our Destructors can be put, and we are always willing to investigate the possibilities and probable saving to be effected.

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

INDUSTRIAL DESTRUCTORS



Destructor at the Soap Works of Co-operative Wholesale Society Ltd. This Destructor is combined with a Water Tube Boiler of 545 sq. ft. heating surface to utilize the heat from the Refuse.

The above illustration shows the type of plant we supply for larger duties than can be obtained from our standard Steel Cased Destructors.

It consists of one grate having a capacity of 15 cwt. per hour of dry refuse. A large combustion chamber is provided having a balanced firebrick lined door for access. The main charging and discharging door is also of the balanced type. "Meldrum" Steam Jet Forced Draught is provided.

A feature of this type of Destructor is that additional grates can be added if further burning capacity is required, and provision should always be made in the building for this eventuality.

A 9" firebrick lining is provided, with 9" redbrick backing, and the buckstays are of very ample section.

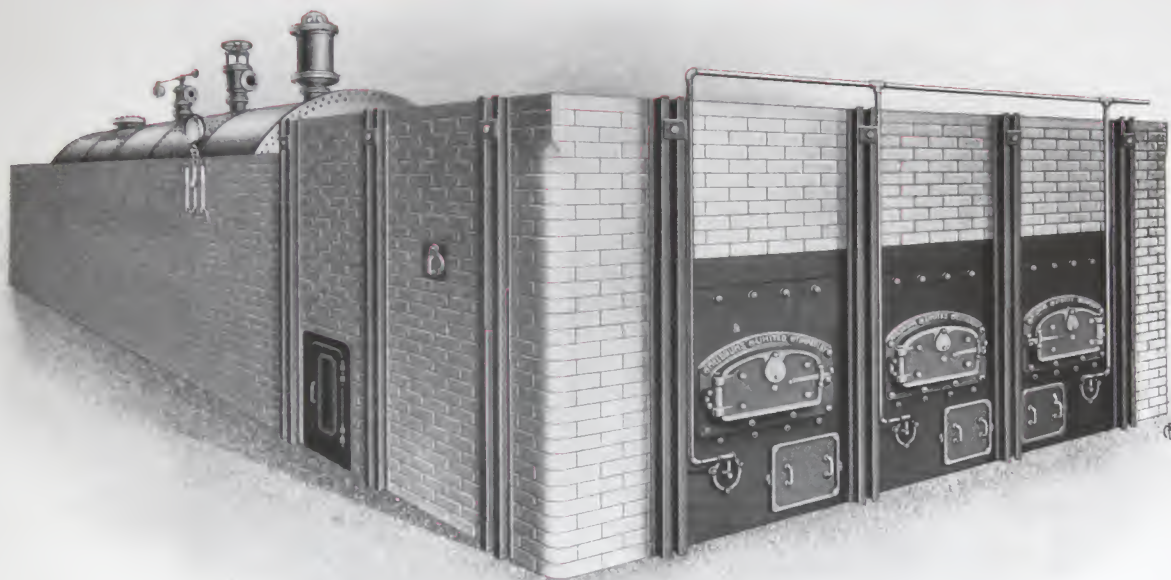
A Babcock & Wilcox Water Tube Boiler provides a useful amount of steam for factory purposes.

This type of plant is an ideal one for large Factories, Saw Mills, Tanneries, etc.

For the same customer as the above plant was supplied to, we have installed much larger plants at their Jam and Biscuit Factories.

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

INDUSTRIAL DESTRUCTORS



3 GRATE DESTRUCTOR and LANCASHIRE BOILER.

The above illustrates a very successful plant installed at a Tannery for burning spent tan and tan pit refuse.

It is capable of dealing with 120 tons per week, and supplies all the steam required by the tannery. It consists of 3 grates continuous above the grate level, but with divided ashpits.

Forced draught is provided by means of Meldrum Steam Jet Blowers, giving a pressure of 2" to 2½" under the grate.

For burning the very wet tan a little coke breeze is mixed with it.

The gases from the Destructor pass through a large combustion chamber before entering the boiler. A large cleaning door is provided for removing the dust deposited.

We have specialized for many years in these large steam raising Destructors, and can undertake to utilize the refuse to the best advantage and get all the heat from it.

For large quantities we can quote for mechanical handling equipment for the refuse and clinker.

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

INDUSTRIAL DESTRUCTORS



DESTRUCTOR and BOILER INSTALLATION at a Lancashire Tannery.

We have equipped numerous Tanneries with our Destructors for steam raising purposes, utilizing the spent tan as fuel.

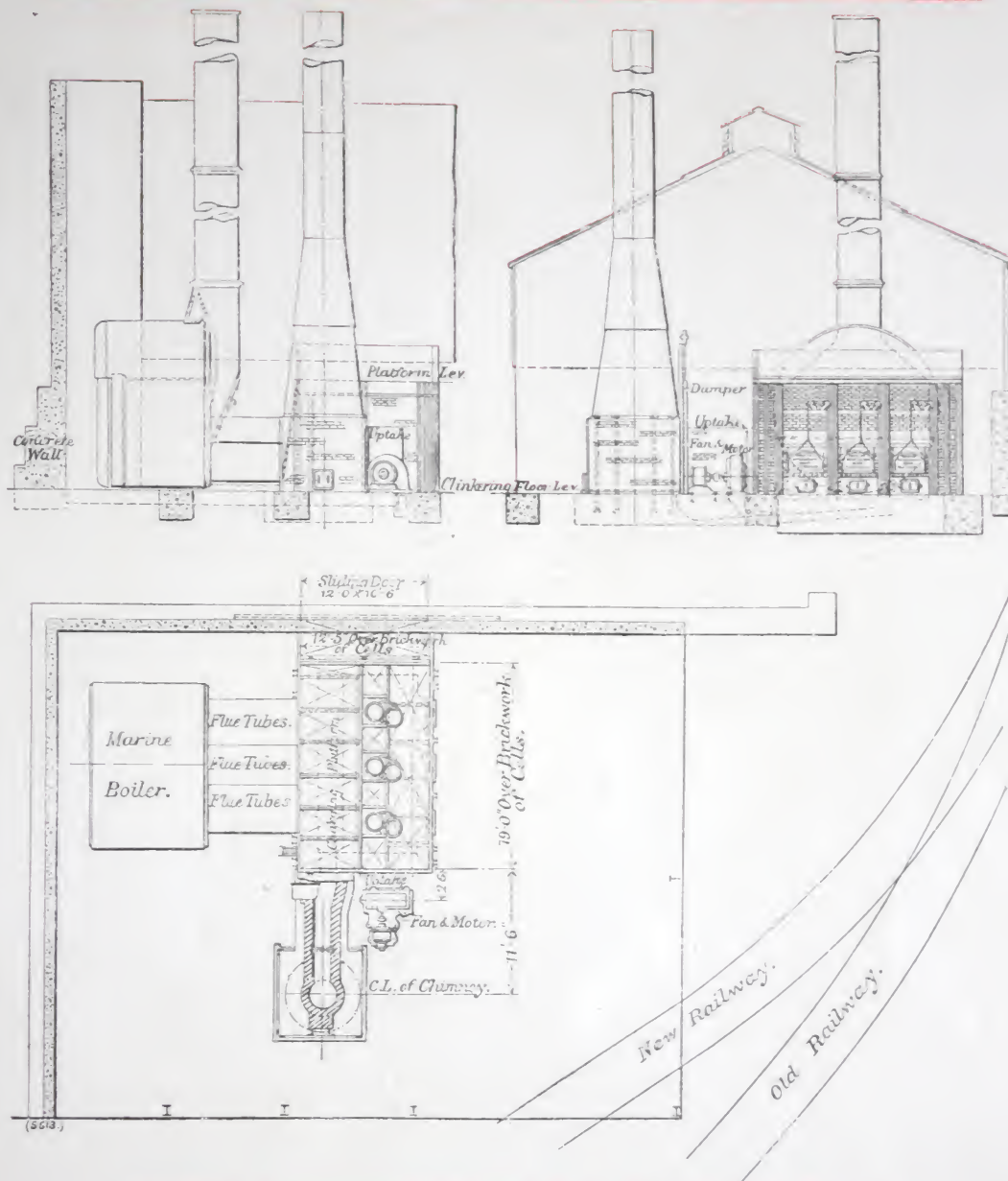
The above plant was installed to consume 20 tons of Myrabolums and Mimosa Bark per day; it consists of 3 grates, combustion chamber and Babcock water tube boiler, having 1218 sq. ft. of heating surface.

An evaporation of 250 gallons per hour is obtained. The forced draught is obtained by means of a steam driven fan, the air supply to each grate being controlled by a separate damper.

With very wet tan refuse, coke breeze is sometimes added to obtain the full output from the boiler.

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

INDUSTRIAL DESTRUCTORS



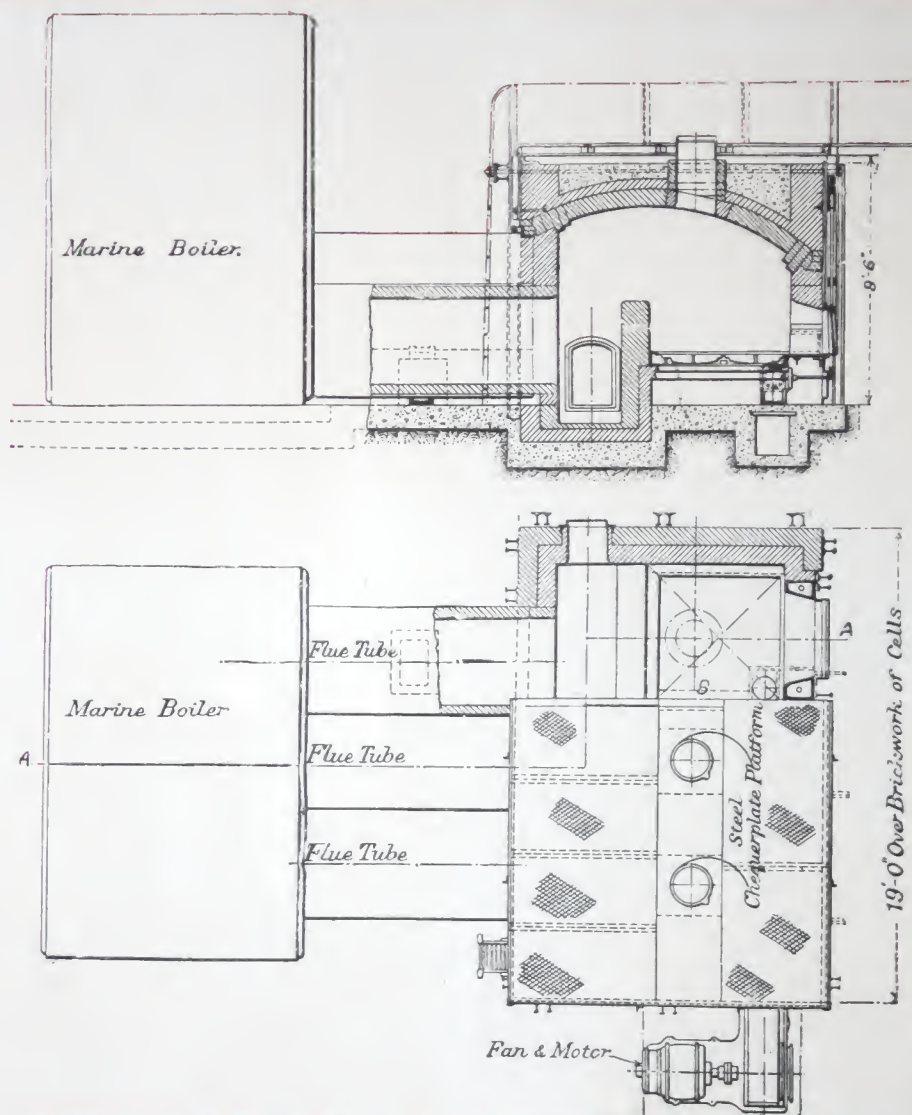
CENTRAL DESTRUCTOR PLANT at Messrs. Cammell Laird's Shipyard.

This Installation consists of a Three Grate Unit firing a Three Flued Marine Boiler 15' 0" dia. x 11' 0" long, having 2,500 sq. ft. of heating surface. The boiler supplies the steam requirements of the smithy. Both top and front feed are provided, the top doors being used for the lighter materials. The Destructor was installed to burn 40 tons per 24 hours, but from the figures given on the following page, it will be seen that this was exceeded by over 12 tons.

The figures show how valuable a quantity of steam can be obtained by collecting the refuse from a large establishment and burning it in an efficient steam raising Destructor.

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

INDUSTRIAL DESTRUCTORS



DESTRUCTOR at Messrs. Cammell Laird's Shipyard.

Section through Furnaces.

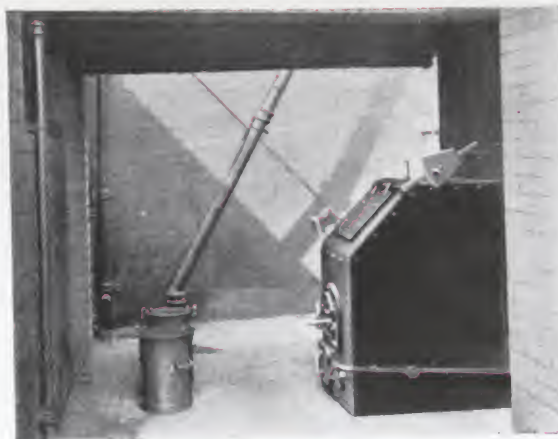
Fuel per hour	...	...	...	...	5,123 lb.
Total water evaporated by boiler	...	...	...	...	6,800 gallons.
Total water evaporated per hour	...	...	...	...	1,182 gallons.
Total water evaporated per lb. of fuel	...	...	...	...	2.3 lb.
Feed temperature entering boiler	...	...	...	...	87 deg. Fah.
Average steam pressure	...	...	...	...	85 lb. per square inch.
Weight of clinker	...	...	...	...	3 tons 10 cwts. = 7,840 lb.
Ditto per cent. of fuel fired	...	...	...	...	26.6 per cent.
Analysis, waste gases leaving boiler	...	...	...	...	CO ₂ = 16.4 per cent.
					CO = 0.4 per cent.
					O = 0.2 per cent.
					N (diff.) = 83.0 per cent.
Equivalent evaporation F. & A. 212 deg. Fah.	...	...	...	...	= 2.6 lb. per lb. of fuel.

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

INDUSTRIAL DESTRUCTORS



W. T. Henley's Telegraph Works Co. Ltd.
Cable Works.



Blackpool Corporation Hospital.



Thames Paper Co. Ltd.
Paper Mill.



Aerated Bread Co. Ltd., London.
Central Bakery.

We illustrate above and overleaf some typical installations of our Industrial Destructors.
We can supply plants for every conceivable class of refuse and with Heaters, Driers, Boilers, &c., for the utilization of the heat of combustion.

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

INDUSTRIAL DESTRUCTORS



Park Royal Ammunition Works.



J. Keiller & Sons, Ltd., Silvertown.

Preserve Works.



Royal Arsenal Co-operative Society, Peckham.

General Stores.



Lovell & Christmas Ltd., London.

Provision Warehouse.

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

MUNICIPAL DESTRUCTORS



CARCASS and OFFAL DESTRUCTOR for the City of Athens.

The above illustrates a Destructor installed at the Slaughter Houses, Athens, to destroy the refuse which accumulates at such places.

It has a burning capacity of approximately four tons per day of eight hours, and is arranged for both top and front feed.

The forced draught is supplied by means of "Meldrum" Steam Jet Blowers, and a motor driven Centrifugal Fan is supplied as a stand by, and for use when the boiler is not being worked.

A Vertical Boiler is arranged to absorb the heat resulting from combustion. It is 6' 6" high by 3' 0" diameter, and suitable for a working pressure of 100 lbs. per square inch.

The chimney is 32' 0" high.

The following figures were obtained on test:—

Refuse fired $1\frac{1}{2}$ tons.

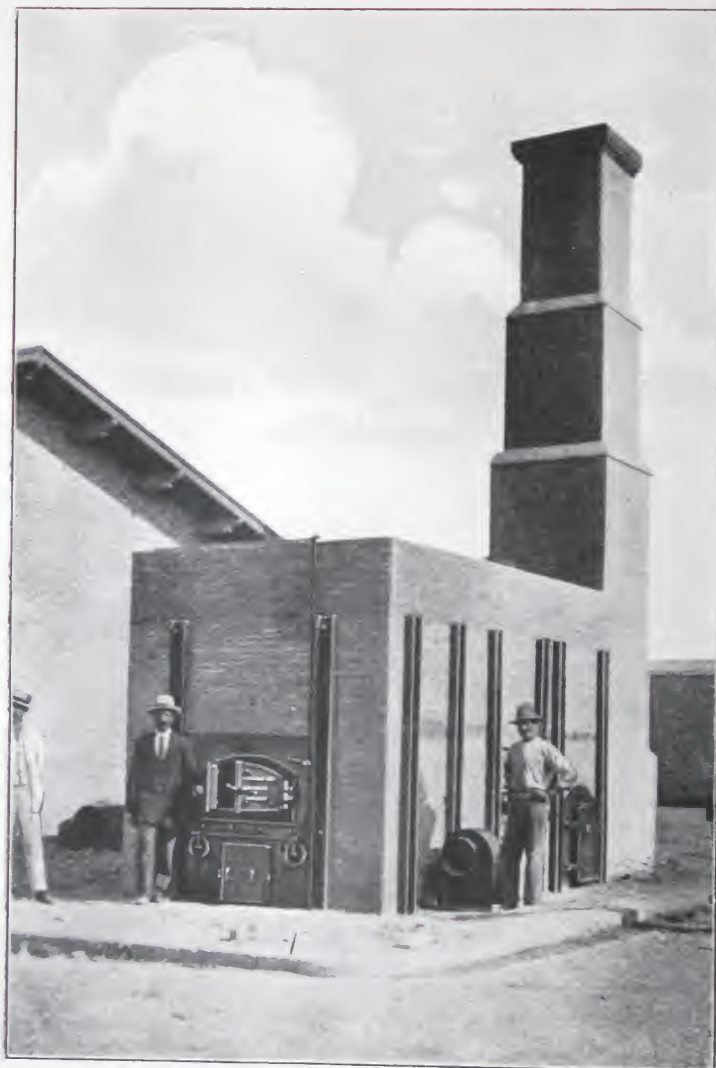
Duration of test 3 hours.

Air pressure in ashpit $1\frac{1}{2}$ ".

Evaporation per hour 200 lbs. at 100 lbs. pressure.

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

MUNICIPAL DESTRUCTORS



CARCASE and OFFAL DESTRUCTOR for the City of Athens.

The above is another view of the Destructor described on the previous page, and shows the Forced Draught Apparatus and Drying Hearth. For tropical and semi-tropical countries, these installations are a necessity in every large town.

We have installed similar plants at Rangoon, Bangkok, &c. For these cities the plants are arranged to deal with a complete buffalo carcase without dissection, and special facilities are provided to deal with these heavy animals.

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

MUNICIPAL DESTRUCTORS



TWO, THREE GRATE UNITS, Factory Lane, Croydon.

The above shows a standard arrangement of top feed Destructor. The plant consists of two units, each having three grates of 25 sq. ft. area. The forced draught is by Meldrum Steam Jet Blowers of the external type.

The gases after passing through the combustion chamber meet in a common flue at the back of the Destructor, traverse a Babcock & Wilcox Watertube Boiler having a heating surface of 1098 sq. ft. This plant will destroy 30 tons of refuse in 8 hours

January, 1921

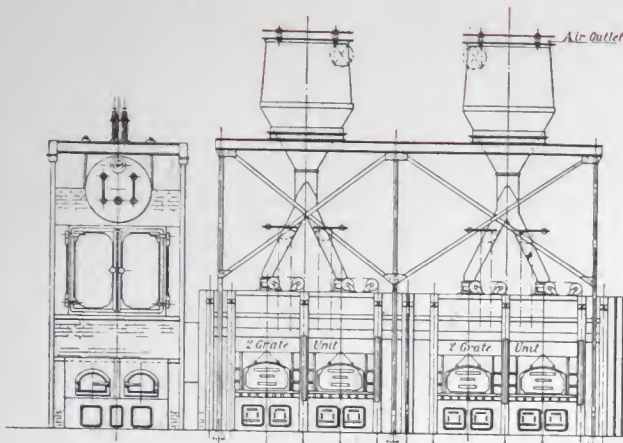
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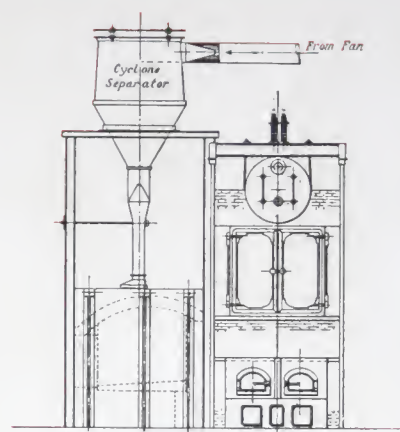
CCA

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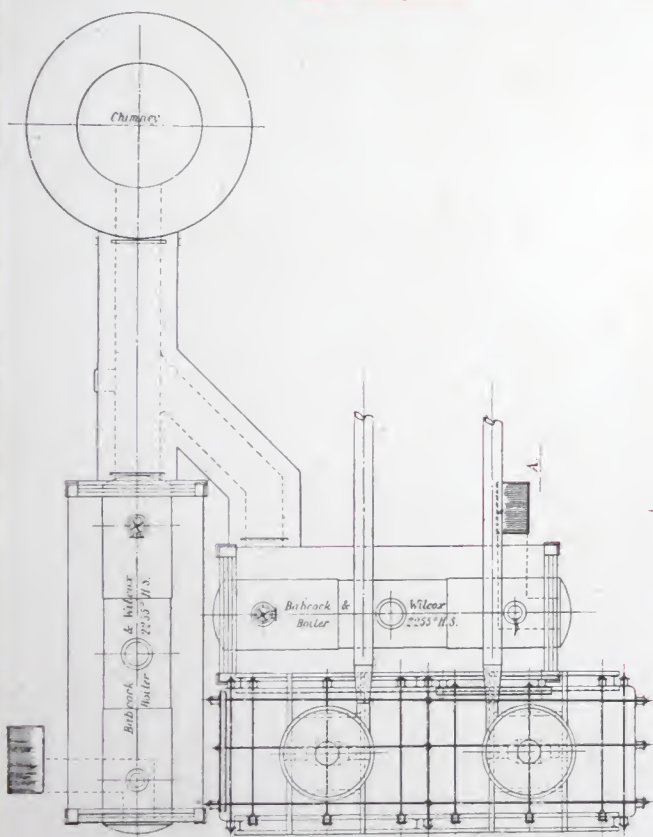
INDUSTRIAL DESTRUCTORS



Front Elevation.

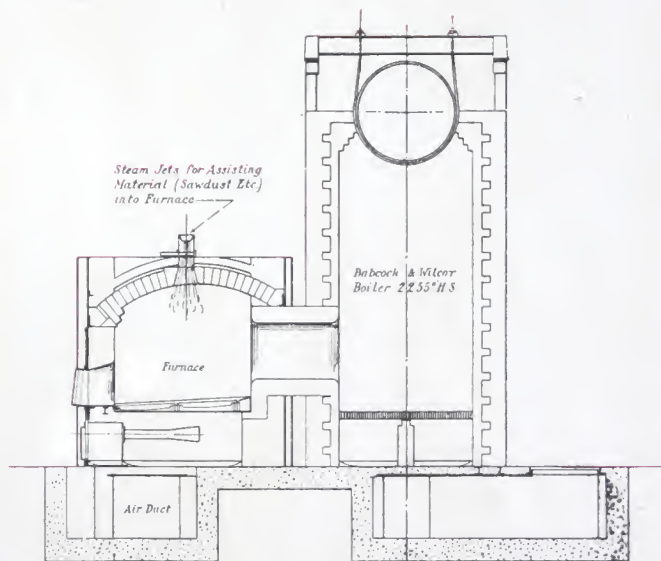


End Elevation.



Plan.

Arrangement of Refuse Destructor Plant for
Steam Raising.



Section Through A.A.

UTILIZATION OF WASTE MATERIALS
FOR THE GENERATION OF STEAM
IN THE SHIPBUILDING YARDS OF
Messrs. HARLAND & WOLFF LTD.,
BELFAST.

For description see reverse.

MELDRUMS LTD., TIMPERLEY, MANCHESTER.

INDUSTRIAL DESTRUCTORS

REFUSE DESTRUCTION IN SHIPYARDS.

Utilizing Waste Material for the Generation of Steam at Harland & Wolff's Shipyard, Belfast.

We installed a Destructor Plant for this firm in 1908, and the plant here described is a repeat order.

It is operated in conjunction with a system of pneumatic collection of the wood refuse from various machines in the different departments and delivered into Cyclone Separators mounted directly above the furnaces. As is well known these Cyclones give the refuse laden air current a rotary motion, and at the same time, as their area is greater than that of the trunking, the air expands and loses its velocity, thereby allowing the refuse to fall by gravity to the bottom and so into the Hoppers in a continuous stream.

The furnaces consist of two 2-grate "Meldrum" Simplex Destructor units, each having a grate area of 50 sq. ft. Their burning capacity is about 45 cwt. of wood, sawdust, chips, and general shop waste per hour.

These furnaces are arranged in conjunction with two Babcock & Wilcox Water-tube Boilers; each boiler having an evaporative capacity of about 8,000 lbs. of steam per hour at a pressure of 60 lbs. per sq. inch.

The general arrangement is shown in the reproduced drawings over leaf.

Special means are adopted for assisting the progress of the material from the hoppers into the furnaces, and also for preventing any possibility of the fine sawdust firing back.

The heavy shop refuse is fed by hand in the ordinary way through the front furnace doors.

Each boiler furnace is fitted with the "Meldrum" Patent Forced Draught system, and it may be here noted that these furnaces allow the lowest grades of Colliery Refuse to be satisfactorily utilized.

The plant is used to generate steam for heating the firm's extensive new workshop.

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CCA

